



Europäisches Patentamt  
European Patent Office  
Office européen des brevets



(11) EP 0 721 178 A3

(12) EUROPEAN PATENT APPLICATION

(88) Date of publication A3:  
09.12.1998 Bulletin 1998/50

(51) Int. Cl.<sup>6</sup>: G10K 11/178

(43) Date of publication A2:  
10.07.1996 Bulletin 1996/28

(21) Application number: 96300078.1

(22) Date of filing: 04.01.1996

(84) Designated Contracting States:  
DE FR GB IT NL SE

• Bremigan, Cary D.  
Madison, Wisconsin 53714 (US)

(30) Priority: 05.01.1995 US 368920

(74) Representative:  
Burke, Steven David et al  
R.G.C. Jenkins & Co.  
26 Caxton Street  
London SW1H 0RJ (GB)

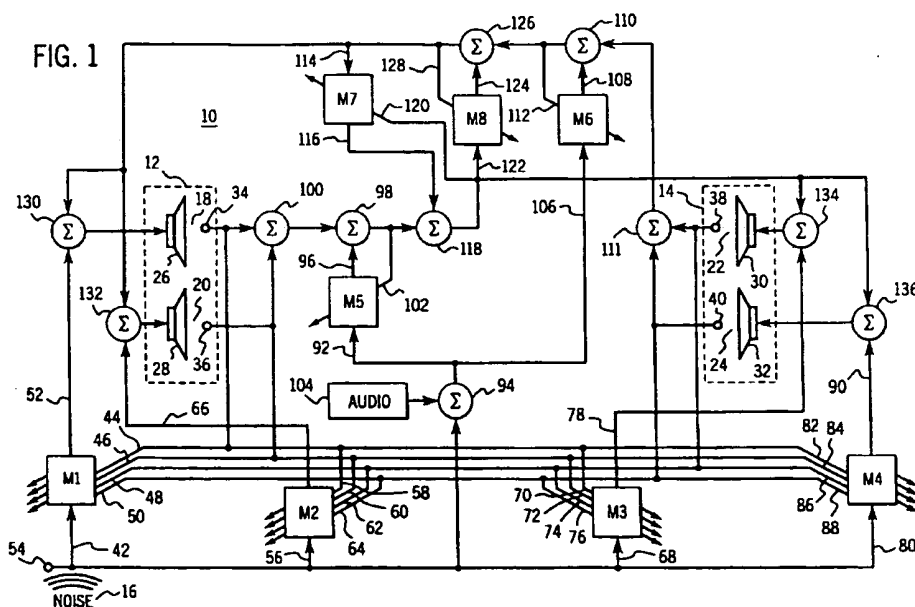
(71) Applicant: DIGISONIX, Inc.  
Middleton, Wisconsin 53562-2543 (US)

(72) Inventors:  
• Eriksson, Larry J.  
Madison, Wisconsin 53714 (US)

(54) Multi-channel communication system

(57) A multi-channel communication system is provided. In an active acoustic attenuation implementation, noise, including cross-coupled noise between channels and locations, designated audio signals, and echoes,

are canceled, but not speech from another location. A particularly desirable vehicle application is provided.



EP 0 721 178 A3



European Patent  
Office

## EUROPEAN SEARCH REPORT

Application Number  
EP 96 30 0078

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.Cl.6)
X Y	US 5 033 082 A (ERIKSSON LARRY J ET AL) * abstract *	27 1-3,9, 10,16, 17,20-22	G10K11/178
	* figure *		
	* column 1, line 27 - line 37 *		
	* column 2, line 46 - line 49 *		
	* claims 1,2,4,13,24,25 *		
Y	US 5 216 722 A (POPOVICH)  * abstract * * figures 8,9 * * claim 1 *	1-3,9, 10,16, 17,20-22	
A	EP 0 560 364 A (HONDA MOTOR CO LTD) * page 7, line 40 - line 44 * * page 24, line 36 - line 40 * * figure 32 *	13,18	
A	US 5 245 664 A (KINOSHITA AKIO ET AL)		TECHNICAL FIELDS SEARCHED (Int.Cl.6)
D,A	US 5 216 721 A (MELTON)		G10K
The present search report has been drawn up for all claims			
Place of search THE HAGUE		Date of completion of the search 20 March 1998	Examiner Ph. de Heering
CATEGORY OF CITED DOCUMENTS X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document		T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document	

EP-3 FORM 1503 03 82 (P04C01)



European Patent  
Office

Application Number  
EP 96 30 0078

**CLAIMS INCURRING FEES**

The present European patent application comprised at the time of filing more than ten claims.

- ☐ Only part of the claims have been paid within the prescribed time limit. The present European search report has been drawn up for the first ten claims and for those claims for which claims fees have been paid, namely claim(s):
- ☐ No claims fees have been paid within the prescribed time limit. The present European search report has been drawn up for the first ten claims.

**LACK OF UNITY OF INVENTION**

The Search Division considers that the present European patent application does not comply with the requirements of unity of invention and relates to several inventions or groups of inventions, namely:

see sheet B

- ☐ All further search fees have been paid within the fixed time limit. The present European search report has been drawn up for all claims.
- ☐ Only part of the further search fees have been paid within the fixed time limit. The present European search report has been drawn up for those parts of the European patent application which relate to the inventions in respect of which search fees have been paid, namely claims:
- ☒ None of the further search fees have been paid within the fixed time limit. The present European search report has been drawn up for those parts of the European patent application which relate to the invention first mentioned in the claims, namely claims:

1-23, 27



European Patent  
Office

LACK OF UNITY OF INVENTION  
SHEET B

Application Number  
EP 96 30 0078

The Search Division considers that the present European patent application does not comply with the requirements of unity of invention and relates to several inventions or groups of inventions, namely:

1. Claims: 1-23,27

Active acoustic noise cancelling communication system,  
notably for vehicle.

2. Claims: 24-26

An occupant restraint system, with a mounted microphone.